# ENERGY STAR® Program Requirements for Refrigerated Beverage Vending Machines

## Partner Commitments
## PRELIMINARY DRAFT

### Commitment

The following are the terms of the ENERGY STAR Partnership Agreement as it pertains to the manufacturing of ENERGY STAR qualified refrigerated beverage vending machines. The ENERGY STAR Partner must adhere to the following program requirements:

- comply with current ENERGY STAR Eligibility Criteria, defining the performance criteria that must be met for use of the ENERGY STAR certification mark on refrigerated beverage vending machines and specifying the testing criteria for refrigerated beverage vending machines. EPA may, at its discretion, conduct tests on products that are referred to as ENERGY STAR qualified. These products may be obtained on the open market, or voluntarily supplied by Partner at EPA's request;

- comply with current ENERGY STAR Logo Use Guidelines, describing how the ENERGY STAR labels and name may be used. Partner is responsible for adhering to these guidelines and for ensuring that its authorized representatives, such as advertising agencies, dealers, and distributors, are also in compliance;

- qualify at least one ENERGY STAR labeled refrigerated beverage vending machine model within one year of activating the refrigerated beverage vending machine portion of the agreement. When Partner qualifies the product, it must meet the specification (e.g., Tier 1 or 2) in effect at that time;

- provide clear and consistent labeling of ENERGY STAR qualified refrigerated beverage vending machines. The ENERGY STAR label must be clearly displayed on the front of the product, in product literature (i.e., user manuals, spec sheets, etc.), and on the manufacturer's Internet site where information about ENERGY STAR qualified models is displayed;

> **Note to Industry:** EPA requires the labeling of all ENERGY STAR qualified products according to one or more of the following options, depending on product design and visibility at both the time of sale and over the use of the product: on the product; in product literature; and on the manufacturer's Internet site. The ENERGY STAR label is well known by consumers and large purchasers as the symbol for energy efficiency. The ENERGY STAR logo should be placed in an area of high visibility, preferably on front of the machine, so that the consumer can see that by manufacturing the ENERGY STAR labeled vending machine and placing it on site, important steps have been taken to reduce air pollution. EPA is open to discussing additional placement options.

- provide to EPA, on an annual basis, an updated list of ENERGY STAR qualifying refrigerated beverage vending machine models. Once the Partner submits its first list of ENERGY STAR labeled refrigerated beverage vending machine models, the Partner will be listed as an ENERGY STAR Partner. Partner must provide annual updates in order to remain on the list of participating product manufacturers;

- provide to EPA, on an annual basis, unit shipment data or other market indicators to assist in

determining the market penetration of ENERGY STAR. Specifically, Partner must submit the total number of ENERGY STAR qualified refrigerated beverage vending machines shipped (in units by model) or an equivalent measurement as agreed to in advance by EPA and Partner. Partner is also encouraged to provide ENERGY STAR qualified unit shipment data segmented by meaningful product characteristics (e.g., capacity, size, speed, or other as relevant), total unit shipments for each model in its product line, and percent of total unit shipments that qualify as ENERGY STAR. The data for each calendar year should be submitted to EPA, preferably in electronic format, no later than the following March and may be provided directly from the Partner or through a third party. The data will be used by EPA only for program evaluation purposes and will be closely controlled. If requested under the Freedom of Information Act (FOIA), EPA will argue that the data is exempt. Any information used will be masked by EPA so as to protect the confidentiality of the Partner;

**Note to Industry:** As noted above, EPA is willing to work through a third party, such as the National Automatic Merchandising Association (NAMA), to obtain refrigerated beverage vending machine shipment data. This data may be masked and provided in an aggregate form so as not to be able to identify specific manufacturer data. This data will not be shared outside of EPA; it is being collected as a tool to gauge the penetration of ENERGY STAR labeled products in the marketplace.

- notify EPA of a change in the designated responsible party or contacts for refrigerated beverage vending machines within 30 days.

## Performance for Special Distinction

In order to receive additional recognition and/or support from EPA for its efforts within the Partnership, the ENERGY STAR Partner may consider the following voluntary measures and should keep EPA informed on the progress of these efforts:

- consider energy efficiency improvements in company facilities and pursue the ENERGY STAR label for buildings;

- purchase ENERGY STAR labeled products. Revise the company purchasing or procurement specifications to include ENERGY STAR. Provide procurement officials' contact information to EPA for periodic updates and coordination. Circulate general ENERGY STAR labeled product information to employees for use when purchasing products for their homes;

- ensure the power management feature is enabled on all ENERGY STAR qualified monitors in use in company facilities, particularly upon installation and after service is performed;

- provide general information about the ENERGY STAR program to employees whose jobs are relevant to the development, marketing, sales, and service of current ENERGY STAR labeled product models;

- feature the ENERGY STAR label(s) on Partner Web site and in other promotional materials. If information concerning ENERGY STAR is provided on the Partner Web site as specified by the ENERGY STAR Web Linking Policy (this document can be found in the Partner Resources section on the ENERGY STAR Web site at www.energystar.gov), EPA may provide links where appropriate to the Partner Web site;

- provide a simple plan to EPA outlining specific measures Partner plans to undertake beyond the program requirements listed above. By doing so, EPA may be able to coordinate, communicate, and/or promote Partner's activities, provide an EPA representative, or include news about the event in the ENERGY STAR newsletter, on the ENERGY STAR Web pages, etc. The plan may be as simple as providing a list of planned activities or planned milestones that Partner would like EPA to be aware of. For example, activities may include: (1) increase the availability of ENERGY STAR

labeled products by converting the entire product line within two years to meet ENERGY STAR guidelines; (2) demonstrate the economic and environmental benefits of energy efficiency through special in-store displays twice a year; (3) provide information to users (via the Web site and user's manual) about energy-saving features and operating characteristics of ENERGY STAR qualified products, and (4) build awareness of the ENERGY STAR Partnership and brand identity by collaborating with EPA on one print advertorial and one live press event;

- provide quarterly, written updates to EPA as to the efforts undertaken by Partner to increase availability of ENERGY STAR qualified products, and to promote awareness of ENERGY STAR and its message.

# ENERGY STAR® Program Requirements for Refrigerated Beverage Vending Machines

## Eligibility Criteria
## PRELIMINARY DRAFT

Below is the Preliminary Draft product specification (Version 1.0) for ENERGY STAR qualified refrigerated beverage vending machines. A product must meet all of the identified criteria if it is to be labeled as ENERGY STAR by its manufacturer.

1) Definitions: Below is a brief description of a refrigerated beverage vending machine and other terms as relevant to ENERGY STAR.

   A. Refrigerated Beverage Vending Machine: A self-contained system designed to accept consumer payments and dispense product at appropriate temperatures without on-site labor intervention. Functions specific to refrigerated beverage vending machines include coin/bill acceptance and change return, product inventory/storage, product selection and dispensing, and volumetric purchase activity tracking.

   B. Machine or Product Capacity: The amount of beverage product that a refrigerated beverage vending machine can hold in its internal cabinet. This number is expressed in number of 12-ounce cans.

   C. Low Power Mode: The reduced power state that the vending machine enters during extended periods of inactivity without jeopardizing its ability to keep vend product cool and return to full operational mode when required by the host site. Low power mode is usually a non-operational mode when compared to the intended use of the product's primary function; however, machines may have the option to meet the low power mode requirement while continuing to vend product.

2) Qualifying Products: Any refrigerated beverage vending machine that meets the definition in Section 1A is eligible for the ENERGY STAR label.

> **Note to Industry:** This Preliminary Draft specification provides performance requirements for closed-front and live display beverage vending machine models. Based on stakeholder interest and data availability, EPA may consider including glass front machine models.
>
> Temperature sensitive product machines are not being considered at this time due to the inherent differences in internal design and tighter (continuous) temperature requirements (35-40 degrees F).

3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet the criteria provided below may qualify as ENERGY STAR.

   A. Energy Consumption: Qualifying models shall consume equal to or less energy in a 24-hr period than the value obtained from the equation shown below:

   $$Y = 0.55 (8.66 + 0.009 \times C)$$

   Note: Y is the 24 hr energy consumption (kWh/day) and C is the machine or product capacity expressed as the maximum number of 12 oz (355 ml) cans the machine can hold. For example, a 600-can capacity machine may consume no more than 7.733, or 7.73 kWh/day (rounded). Similarly, 700-can and 800-can capacities may consume no more than 8.228, or 8.23 kWh/day and 8.723, or 8.72 kWh/day respectively.

   B. Low Power Mode: Qualifying models shall come equipped with hard wired controls and software

capable of automatically placing the machine into a low power use mode during periods of extended inactivity. This mode must be capable of (a) reducing the lights to 20% or less of default lighting levels, (b) allowing the beverage temperature to rise to a set point of up to 50 degrees F during periods of extended machine inactivity, and (c) returning the machine back to its normal operating conditions at the conclusion of the inactivity period. Each machine shall be capable of having the low power mode settings adjusted on-site to account for site-specific conditions.

**Note to Industry:** The energy consumption equation is based on the Canada Standards Association (CSA) vending machine standard CAN/CSA-C804-96 *Energy Performance of Vending Machines* for Machine Type A, which was based on the performance of machines tested in the mid 1990's. The equation is equivalent to setting a specification that captures those machines that perform 45% better than the current CSA standard.

Please note that the primary objective of ENERGY STAR is to recognize the most energy-efficient products in the market through the use of the ENERGY STAR label. In developing a specification, EPA considers the following criteria:

- Significant energy savings can be realized on a national basis
- Product performance is maintained or enhanced with increased efficiency
- Energy-efficient purchase will be cost effective
- Energy efficiency can be achieved through several technology options; at least one of which is non-proprietary
- Product energy consumption and performance can be measured and verified with testing
- Labeling would effectively differentiate products and be visible for purchasers

It is not EPA's intention to design a specification that will allow every model to qualify for the label. However, EPA has received limited data points thereby making it difficult to determine the feasibility of these performance requirements. EPA is interested in collecting additional energy consumption data from manufacturers and other interested parties to determine if this specification level is feasible and justified based on the above criteria.

EPA is considering requiring a software/control default setting that is set by the manufacturer prior to shipping. However, EPA understands that these products can be used in a number of different environments and that it is difficult to use one default for an entire model line. EPA's goal in including the proposed default requirement is to ensure that the software capabilities are being used to their fullest potential based on the host site. EPA is interested in gathering feedback as to how to implement a software control requirement to reach this goal.

4) Test Criteria: Manufacturers are required to perform tests and self-certify those product models that meet the ENERGY STAR guidelines.

   A. In performing these tests, partner agrees to measure a model's energy efficiency using ASHRAE Standard 32.1-1997 *Methods of Testing for Rating Bottled and Canned Beverage Machines*.

   B. Test results must be reported to EPA using the Refrigerated Beverage Vending Machine Qualifying Product Information Form.

5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR will be defined as the *effective date* of the agreement. The ENERGY STAR Refrigerated Beverage Vending Machine specification is effective **TBD**.

**Note to Industry:** It is the hope of EPA to be able to announce a vending machine specification in partnership with industry at either the NAMA Spring or Fall Expos in 2003. EPA is interested in obtaining feedback on this as well as an appropriate effective date that would allow for product to be available at the time of the announcement.

6) Future Specification Revisions: ENERGY STAR reserves the right to change the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through industry discussions. **In the event of a specification revision, please note that ENERGY STAR qualification is not automatically granted for the life of a product model.** To carry the ENERGY STAR label, a product model must meet the ENERGY STAR specification in effect on the model's date of manufacture. The date of manufacture is specific to each unit and is the date which a unit is considered to be completely assembled.